

WHAT IS CLAIMED IS:

1. A data structure used by a color management system to model color behavior of a color device, comprising:

a measurement component comprising a collection of measurements, wherein each measurement represents at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both; and

a characterization process component comprising platform-independent code for a characterization process which processes said collection of measurements to produce a color behavior model for the color device.

2. A data structure of Claim 1, further comprising:

a control parameter component comprising control parameters representing a type or state of the color device,

wherein said characterization process component processes said collection of measurements in accordance with said control parameters, in order to produce a color behavior model for the color device corresponding to said type or state of the color device.

3. A data structure of Claim 1, wherein said data structure is stored as a device profile in ICC format, using custom tags.

4. A data structure of Claim 2, wherein said data structure is stored as a device profile in ICC format, using custom tags.

5. A color management system which generates a color transform to model color behavior of a color device, comprising:

a program memory for storing a data structure comprising (1) a measurement component comprising a collection of measurements, wherein each measurement represents at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both, and (2) a characterization process component comprising platform-independent code for a characterization process which processes said collection of measurements to produce a color behavior model for the color device; and

a processor for (1) compiling or interpreting said platform-independent code stored in said program memory and (2) executing the compiled or interpreted code on the measurement component to generate the color transform.

6. A color management system according to Claim 5, wherein said program memory further stores a control parameter component comprising control parameters representing a type or state of the color device, and

wherein said characterization process processes said collection of measurements in accordance with said control parameters, in order to produce a color behavior model for the color device corresponding to said type or state of the color device.

7. A method of generating a color transform using a data structure by which color behavior of a color device is modeled, the method comprising:

a compiling step for compiling or interpreting platform-independent code stored in a data structure to output computer-executable code, where said data structure comprises (1) a measurement component comprising a collection of measurements, wherein each measurement represents at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color

device, or a set of color coordinates which correlate to said at least one control signal, or both, and (2) a characterization process component comprising said platform-independent code, wherein said platform-independent code represents a characterization process which processes said collection of measurements to produce a color behavior model for the color device;

an execution step for executing said computer-executable code on the measurement component to generate the color transform.

8. A method of generating a color transform according to Claim 7, wherein said data structure further comprises a control parameter component comprising control parameters representing a type or state of the color device, and

wherein said characterization process processes said collection of measurements in accordance with said control parameters, in order to produce a color behavior model for the color device corresponding to said type or state of the color device.

9. A method of generating a color transform according to Claim 7, wherein said data structure is stored as a device profile in ICC format, using custom tags.

10. A method of generating a color transform according to Claim 8, wherein said data structure is stored as a device profile in ICC format, using custom tags.

11. A method of generating a data structure by which color behavior of a color device is modeled, the method comprising:
measuring color data for the color device, said color data representing at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color

device, or a set of color coordinates which correlate to said at least one control signal, or both;

storing said color data in a measurement-only profile in a measurement component; and

storing platform-independent code by which the measurement-only profiles are used to generate a color transform, in a characterization process component.

12. A computer-readable storage medium in which is stored a program for generating a color transform using a data structure by which color behavior of a color device is modeled, said program comprising codes for permitting the computer to perform:

a compiling step for compiling or interpreting platform-independent code stored in a data structure to output computer-executable code, where said data structure comprises (1) a measurement component comprising a collection of measurements, wherein each measurement represents at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both, and (2) a characterization process component comprising said platform-independent code, wherein said platform-independent code represents a characterization process which processes said collection of measurements to produce a color behavior model for the color device;

an execution step for executing said computer-executable code on the measurement component to generate the color transform.

13. A computer-readable storage medium according to Claim 12, wherein said data structure further comprises a control parameter component comprising control parameters representing a type or state of the color device, and

wherein said characterization process processes said collection of measurements in accordance with said control parameters, in order to produce a color behavior model for the color device corresponding to said type or state of the color device.

14. A computer-readable storage medium according to Claim 12, wherein said data structure is stored as a device profile in ICC format, using custom tags.

15. A computer-readable storage medium according to Claim 13, wherein said data structure is stored as a device profile in ICC format, using custom tags.

16. A computer-readable storage medium in which is stored a program for generating a data structure by which color behavior of a color device is modeled, said program comprising codes for controlling the computer to perform:

a measuring step, for measuring color data for the color device, said color data representing at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both;

a first storing step, for storing said color data in a measurement-only profile in a measurement component; and

a second storing step, for storing platform-independent code by which the measurement-only profiles are used to generate a color transform, in a characterization process component.

17. Computer-executable program code stored on a computer readable medium, said computer-executable program code for use in a color

management system executing in a computer system, for generating a color transform using a data structure by which color behavior of a color device is modeled, the computer-executable program code comprising:

code for compiling or interpreting platform-independent code stored in a data structure to output computer-executable code, where said data structure comprises (1) a measurement component comprising a collection of measurements, wherein each measurement represents at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both, and (2) a characterization process component comprising said platform-independent code, wherein said platform-independent code represents a characterization process which processes said collection of measurements to produce a color behavior model for the color device;

code for executing said computer-executable code on the measurement component to generate the color transform.

18. Computer-executable program code according to Claim 17, wherein said data structure further comprises a control parameter component comprising control parameters representing a type or state of the color device, and

wherein said characterization process processes said collection of measurements in accordance with said control parameters, in order to produce a color behavior model for the color device corresponding to said type or state of the color device.

19. Computer-executable program code according to Claim 17 wherein said data structure is stored as a device profile in ICC format, using custom tags.

20. Computer-executable program code according to Claim 18, wherein said data structure is stored as a device profile in ICC format, using custom tags.

21. Computer-executable program code stored on a computer readable medium, said computer-executable program code for use in a color management system executing in a computer system, for generating a data structure by which color behavior of a color device is modeled, the computer-executable program code comprising:

code for measuring color data for the color device, said color data representing at least one control signal by which a sample color measurement is obtained by effecting a corresponding color output from or input to the color device, or a set of color coordinates which correlate to said at least one control signal, or both;

code for storing said color data in a measurement-only profile in a measurement component; and

code for storing platform-independent code by which the measurement-only profiles are used to generate a color transform, in a characterization process component.